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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/533,029 03/22/00 HEARD J MB1-0010

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KAREN J GUERRERO
MENDEL BIOTECHNOLOGY INC
21375 CABOT BOULEVARD
HAYWARD CA 94545

EXAMINER

KRUSE, D

ART UNIT	PAPER NUMBER
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1638

DATE MAILED:

04/30/01

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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/533,029

Applicant(s)

HEARD ET AL.

Examiner

David H Kruse

Art Unit

1638

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claims ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☐ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____
- 18) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other:

DETAILED ACTION

1. The following is in response to Applicant's response filed 30 March 2001 in Paper No. 10.
2. The amendments to the Title is noted and acceptable (response, page 1).
3. The rejection of Claims 1, 5, 9 and 13 under 35 U.S.C. § 112, second paragraph for being in an improper Markush format is withdrawn in view of Applicant's amendment.

The rejection of Claims 2, 6 and 10 under 35 U.S.C. § 112, second paragraph because the phrase "conserved domain" is indefinite is withdrawn in view of Applicant's amendment.

The rejection of Claims 4 and 8 under 35 U.S.C. § 112, second paragraph because of the phrase "tissue active" is withdrawn in view of Applicant's amendment.

The rejection of claim 9 under 35 U.S.C. § 112, second paragraph concerning the term "gene" is withdrawn in view of Applicant's response.

Drawings

4. The drawings filed 22 March 2000 were approved by the Draftsman as submitted.

Specification

5. The abstract of the disclosure is objected to because it was not submitted on a separate sheet in the Applicant's response filed 30 March 2001. Correction is required. See MPEP § 608.01(b).

Election/Restrictions

6. This application contains claims 14-16 drawn to an invention nonelected with traverse in Paper No. 3, filed 15 September 2000. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR § 1.144). See MPEP § 821.01.

7. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR § 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR § 1.48(b) and by the fee required under 37 CFR § 1.17(i).

Sequence Rules

8. Claims 2, 6 and 10 fail to comply with 37 U.S.C. § 1.821(d) in that they refer to sequences provided in Figure 1. The claims should refer to the specific amino acid residues of each SEQ ID NO: recited.

Response to Arguments

9. Applicant's arguments filed 30 March 2001 in Paper Number 10 have been fully considered but they are not persuasive.

10. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejection - 35 USC § 101/112

11. Claims 1-13 remain rejected under 35 U.S.C. § 101 because the claimed invention is not supported by either a specific and substantial asserted utility or a well-established utility. This rejection is repeated for the reason of record as set forth in the last Office action mailed 13 November 2000. Applicant's arguments filed 30 March 2001 have been fully considered but they are not persuasive.

Applicant argues that the putative transcription factors were identified as MYB domain transcription factors by sequence analysis and that it would make sense that if a transcription factor is preferentially expressed under specific conditions, said expression would lead to increased pathogen tolerance (response, page 4). In addition, Applicant argues that Applicant has established that when some of the identified transcription factors are overexpressed in a plant, the plant had an improved phenotype for plant disease/pathogen tolerance.

Examiner responds that in the instant case the specification of the instant application does not teach the functional role of the putative transcription factors designated as SEQ ID No. 32, 40, 58, 62, 68, 86, 88, 94, or 112, and hence fails to teach the use of plants transformed with nucleotide sequences encoding said putative transcription factors. The state of the art at the time of Applicant's invention concerning the function of MYB transcription factors is that MYB's are able to affect transcription of multiple genes and influence multiple phenotypes. In the instant case, Applicant has not provided evidence *in planta* that the disclosed sequences in fact modulate pathogen resistance or tolerance. In addition, the plants transformed with putative transcription

factors in Example VII of the Specification are not identified as being transformed with MYB transcription factors, of which the instant claims are directed and hence the argument is moot.

Claims 1-13 also remain rejected under 35 U.S.C. § 112, first paragraph. Specifically, since the claimed invention is not supported by either a specific and substantial asserted utility or a well established utility for the reasons set forth above, one skilled in the art clearly would not know how to use the claimed invention.

Applicant is invited to provide evidence in the form of a 1.132 declaration that the claimed nucleotide sequences actually confer disease tolerance or resistance to a plant transformed therewith. If Applicant is able to provide such evidence, the scope of the claimed invention would be limited to the disclosed sequences and plants transformed therewith.

Claim Rejections - 35 USC § 112

12. Claims 5 and 13 remain rejected under 35 U.S.C. § 112, second paragraph because the term "altering" is unclear because the Specification defines "trait modification" at pages 6 and 7. It is suggested that the term -- increasing -- or -- enhancing -- compared to an untransformed plant be used in place of "altering". It would be unclear what the utility of decreasing or suppressing disease tolerance or resistance of a plant would be. Also, see Claim 9.

13. Claims 5 and 13 remain rejected under 35 U.S.C. § 112, second paragraph because it is unclear how one identifies a transformed plant from a population of only one plant. It is suggested that step (a) recite -- transforming plants --. In addition, at

step (a) of claim 13 the phrase "the plants" is indefinite because the phrase implies that the method starts with a disease tolerant or resistant plant by referring to "a plant" in the preamble of the claim.

14. Claim 9 remains rejected under 35 U.S.C. § 112, second paragraph because the method step "(b)" does not make sense as method step "(a)" already states "transforming a plant". Method step "(b)" is not deemed necessary. Applicant appears to have inadvertently left the step in the claim because the response states that the step was removed (response, page 5). As the claim is presently worded, there is also a lack of agreement between the phrase "altering expression levels of at least one gene" in the preamble and the phrase "having an altered disease tolerance or resistance" at step (b). Appropriate correction is required.

Claim Rejections - 35 USC § 102

15. Claims 1-13 remain rejected under 35 U.S.C. § 102(e) as being anticipated by Klessig *et al*, (U.S. Patent 5,939,601). This rejection is repeated for the reason of record as set forth in the last Office action mailed 13 November 2000. Applicant's arguments filed 30 March 2001 have been fully considered but they are not persuasive.

Applicant argues that the Yamaguchi-Shinozaki reference (?) does not provide the sequences of the present invention (response, page 5). It is believed that Applicant intends to refer to the Klessig reference.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the provided sequences SEQ ID Nos. 32, 40, 58, 62, 68, 86, 88, 94, or 112) are

not claimed in the rejected claim(s). Specifically, Applicant has claimed a transgenic plant comprising a polynucleotide sequence encoding a polypeptide comprising at least 6 consecutive amino acids of the disclosed sequences and a method of making same. Klessig discloses a transgenic plant comprising a polynucleotide sequence encoding a polypeptide comprising at least 6 consecutive amino acids of all of the disclosed sequences. Hence, all of the claim limitations were previously disclosed by Klessig.

Double Patenting

16. Claims 1-4 remain provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over the pending claims of copending Application No. 09/532591. This rejection is repeated for the reason of record as set forth in the last Office action mailed 13 November 2000. Applicant has not provided any arguments in the response filed 30 March 2001 and hence the rejection is maintained.

It is noted by the Examiner that Applicant has elected polynucleotide sequences encoding putative MYB transcription factors in the copending application and plants transformed therewith. Hence, the transgenic plants of the copending application would inherently have the claimed phenotype of the transgenic plants of the instant application and thus be obvious in view of the copending application. Specifically noted is SEQ ID NO: 112 of the instant application and SEQ ID NO: 214 of the copending application.

Conclusion

17. No claims are allowed.
18. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR § 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR § 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David H. Kruse, Ph.D. whose telephone number is (703) 306-4539. The examiner can normally be reached on Monday to Friday from 8:00 a.m. to 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Paula Hutzell can be reached at (703) 308-4310. The fax telephone number for this Group is (703) 308-4242 or (703) 305-3014.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Yolanda Vines whose telephone number is (703) 305-2365.



AMY J. NELSON, PH.D.
PRIMARY EXAMINER

David H. Kruse, Ph.D.
18 April, 2001